

**“Antecedents to HOPE, context & relevance of HOPE:
lessons from the past, messages for the future”**
Dedicated to the Memory of Laura Țugulea

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Dear Colleagues, dear students, dear friends,
Dragi colegi, dragi studenti, dragi prieteni,
Chers Collègues, chers étudiants, chers amis,
Szanowni Koledzy, Drodzy Studenci, Drodzy Przyjaciele,
Geehrte Kollegen, liebe Studenten(innen), liebe Freunde,
Gentili Colleghi, cari studenti, cari amici,
Geachte Collega's, beste studenten, beste vrienden,

It is a great honour and a privilege for me contributing to this session dedicated to the memory of em. prof. dr. Laura Țugulea here in *Helsingin yliopisto/ Helsingfors universitet*, Helsinki [FI]. Although this is the 1st HOPE Annual Forum, I consider it as the 14th EUPEN General Forum EGF2014, after the previous 13th EGF2011 in Limassol [CY]. The continuity of our network, which has been so important to the friendly relations built-up over the years, would be signaled by titling the Forum in this way.

Since three speakers will treat the subject, we agreed that the overlap would be minimal. While my talk will be more a chronological collection of anecdotes, Gareth Jones' talk is more directed to informing us all of the origin and previous achievements of the EUPEN network and particularly on Laura's contributions in this.

The dichotomy of the two main characteristics in the personality of Laura Țugulea will be translucent in my talk: on one side her appreciation of tradition, respect for values and identity, and on the other hand her strive for change and innovation with belief in the future. I expressed the name of this university in the local languages, Finnish and Swedish, because from the start of the ERASMUS era the use of the original name of the HEI was imposed by the programme. I find it a pity that the local languages are not used when appropriate, losing in this way part of Europe's cultural diversity. So Laura's surname starts with a Ț and not a T, that's why it is pronounced phonetically [tj]; an error I made (and which Laura corrected) when we first met. On the other hand the unity in Europe is kept by the recommendation of taking as norm the two-letter country codes ISO 3166-1 alpha-2 for the country's abbreviation, used by the *European Commission* (E.C.), the *Council of Europe* (CoE) and the *OECD* (*The Organisation for Economic Co-operation and Development*).

Laura Țugulea was born on 4 January 1948 in București [RO] and made a splendid scientific and academic career (see ref. 1). Twenty years later, on 26 September 1968, the *European Physical Society* (EPS) was created by Gilberto Bernardini (1906/95) with among the goals, “*the encouragement of exchange of students and young physicists*”. The EPS association extended to a total of 42 national physical societies, representing more than 120 000 members and physicists in Europe. The role of EPS in our activities will become clear and will represent a red thread up to the very end of my talk. Again almost twenty years later on 9 November 1989, when driving back home on the German *Autobahnen* from an experimental shift at the Max I accelerator in Lund [SE], I was surprised seeing such a huge number of *Trabant* cars. Soon the auto radio announced the fall of the

Berlin Wall with the implication that probably one third of this audience would otherwise not have been present here today.

In the Autumn of 1992 prof. dr. Ernst Heer, former Rector of *Université de Genève* [CH], established the EMSPS (*European Mobility Scheme of Physics Students*). He previously obtained experience with a student mobility initiative among the different language groups in Switzerland. The scheme was not only relying on support from the then-more-than-100 European Community and EFTA partners via an *Inter-University Co-operation Project* (ICP, co-ordinated by *Universiteit Gent*, H. Ferdinande [BE]) but also via a set of five *Mobility Joint European Projects* in HU, PL, LT, LV & RO from the TEMPUS programme (MJEP, co-ordinated by *Leibniz Universität Hannover*, P. Sauer [DE]). It was a pure coincidence that in that period a Romanian doctoral student at UGent, Tibor Becze-Déak, from the Transylvania region and of Hungarian descent, suggested Laura Țugulea (his former teacher in București) as the possible Romanian national co-ordinator via me to Peter Sauer. In this way both Laura and I learned our '*métier*' of 'network co-ordinator' from our Swiss 'network master', Pr Heer. Ernst always prepared the agenda for his management meetings with such a precision that even the time to be spent on each topic was already stated in advance and also seriously observed when treated! Laura was also the co-ordinator of a TEMPUS project '*EMSPS with Romania*' (1996/8) .

Prior to the EUPEN Network the E.C. launched a call for a Thematic Evaluation Conference (TEC) in the frame of the SOCRATES programme. With the help of other ICPs in physics the EMSPS organised on 7/8 April 1995 in *Universiteit Gent*, Gent [BE] this bilingual meeting on "*Physics Studies for Tomorrow's Europe / L'enseignement de la physique pour l'Europe de demain*" (see ref. 2). Representatives of 24 western, central and eastern European countries (including Laura for Romania) reported on (i) the physics studies (degree programmes) in their countries, (ii) the needs for co-operation and (iii) the implementation of those aims in a European context.

In those heroic times reimbursements for expenses to participants from central and eastern European countries (among which Laura) were not easy. Travel for those participants was arranged via the official conference carrier SABENA (*Société Anonyme Belge pour l'Exploitation de la Navigation Aérienne*). Vouchers were sent which could be exchanged immediately to flight tickets at the local SABENA agencies. Accommodation was accounted by providing a '*per diem*' cash. One has to realise that the euro currency did not exist yet , although the grant was given in ecu with a fixed exchange rate to the BEF (Belgian franc). Hence, in order to minimize exchange charges, I, the conference organiser, had to advance before the meeting a total sum for paying out these cash amounts to those participants of the order of three months of my salary. I was reimbursed by the Financial Service of *UGent* for these cash amounts a month after the meeting by providing proof of attendance by the concerned participants' signatures.

The TEC concluded with the creation of a permanent forum and gave the start to the formation of a sustainable network, the *European Physics Education Network* (EUPEN) (see ref. 2). The consortium received a three years' grant (1996/99), followed by a dissemination year (1999/2000) and another three years' grant (2000/03) for an academic network project from SOCRATES. During this whole period I was the co-ordinator, scientific and financial manager, and newsletter editor. The proceedings of all the forums were published as a series of seven books '*Inquiries into European Higher Education in Physics*'. From the start in 2000 a close collaboration was established with the '*Tuning Educational Structures in Europe*' (for short 'TUNING') initiatives. In this project universities did not look for uniformity in their degree programmes but simply for points of reference, convergence and common understanding. The EUPEN network cooperated in synergy as the Subject Area Group (SAG) in physics.



Laura Ţugulea at the age of 22



The Management Committee, the Advisory Board and some WG Chairpersons at the Meeting in UPMC, Paris [FR] 10/11 October 2013 (Laura is fourth from the right)

I was astonished on 4 October 2002 seeing Laura Ţugulea (after a night train journey) sitting in the aula of the *Universitatea din Oradea*, Oradea [RO] where I received a dr. h. c. degree. Due to the ceremony we were not able to meet, but the next day Laura emailed me *"Many times and in different occasions, I emphasized your precious and continuous support for the Romanian HE in Physics in the process of 'integration' in the European family"*.

during the academic year 2004/05 each month I distributed the e-zine *EUPEN-on-line* to inform the partners on the European HE scene and to stimulate ideas for a new E.C.'s grant application in order to revive the network. As a result was a network project in physics, *'Stakeholders Tune European Physics Studies'* (STEPS), was funded within the SOCRATES programme by the E.C.'s Directorate General, Education and Culture (DG EAC) (see ref. 2). In that period Laura Ţugulea represented the central and eastern European countries in the TUNING network for the physics subject area.

The STEPS TWO network (2008/11) took along the aims and goals of the Bologna declaration (see ref. 3) but extended them to include a study of the important question of the shortage of physics teachers in Europe's schools and a survey of national approaches to teacher training. The network was co-ordinated by the *Universitatea din Bucureşti* (L. Ţugulea [RO]) and contracted by the *Universiteit Antwerpen* (J. Naudts [BE]), a real team uniting western and eastern Europe, again with extra support by EPS. It continued to use the partnership and expertise of the EUPEN consortium. Laura showed here her mastery of efficient and transparent management and preferred working by a 'people-to-people dialogue' strategy, incorporating in all meetings a small gathering of the M.C. and the A.B. The Management Committee explicitly included the three Working Group Chairs.

In September 2013 *Université Pierre et Marie Curie* (UPMC) received the good news that the multilateral network application to the EAC EA was selected. Hence, the HOPE (*Horizons in Physics Education*) project started its activities with a Meeting of the Management Committee, the Advisory Board (of which Laura was a member) and most of the WG chairpersons in UPMC, Paris[FR] on 10/11 October 2013. These were the days most of us did see Laura for the last time. She contributed remarkably to the start of the new network. In December 2013 Laura received an offer to apply for a three-months visiting-professorship during the Summer of 2014 at the *Institute for the Advancement of Higher Education* at Hokkaido University, Sapporo [JP]. In 2011 she expressed her interest in Japan

by delivering an invited talk 'Asia - Europe Education, Bridges which AAPPs & EPS have to use' at the Asia-Europe Physics Summit 2 (ASEPS2) in Wrocław [PL].

My last email contact with Laura happened on 15 February 2014 (about a fortnight before her death), when I sent her a slide-show with 73 pictures of 'La Roumanie rurale'. The next day she replied "Thank you very much for the wonderful 'Roumanie rurale'!! I love so much this 'treasure' of my country. Probably you noticed.... I hope that at the end of this month, I will be recovered. Probably I will not be capable to attend the Lille WG2 meeting, but starting May I could do more things". Just a few days before she died she received the confirmation for her visiting-professorship in Japan!

In the night of 2/3 March 2014 Laura Țugulea passed away in the hospital totally unexpected. Together with my wife I sent to her family the email "Our most sincere condolences in Christian faith go to her beloved husband Mircea and her son Andrei". One of her most active students in STEPS & STEPS TWO, Liviu Bileanu, wrote "Tens maybe hundreds of students remember how patiently Professor Țugulea helped them to get through the Erasmus Mobility Scheme. ... Through her diplomatic skills, kindness and superb attitude in critical moments, Professor Țugulea was one of the most active persons in STEPS and STEPS TWO. She was the one who constantly encouraged me and my fellow students to participate actively to the EUPEN meetings and she also supported the students' committee inside EUPEN".

But now it is most important to consider the future for the academic/thematic/multilateral network. In the frame of the ERASMUS+ (2014/20) programme the co-operation cannot be extended, since even the ECTN (European Chemistry Thematic Network) has to stop after eighteen years of continuous existence from 1996 on till now. In the April HOPE WG2 Meeting in Villeneuve-d'Ascq/Lille [FR], in the July GIREP/MPTL2014 Conference in Palermo [IT] and in the August ICPS2014 Conference of the physics students in Heidelberg [DE] I explained in my two last slides how the continuity of the network could be established with the help of EPS.

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European think tank Physics Studies (i)
少年よ、大志を抱け / Be Ambitious (Hokudai)

to create in all European countries

- 'Stimulating Physics Network' cfr 'Institute of Physics' in UK
- 'Konferenz der Fachbereiche Physik' cfr 'Deutsche Physikalische Gesellschaft' in DE

but such *think tank* already exists on European scale

- HEIs: i.e. 'European University Association'
- Schools: i.e. 'European Schoolnet'

vs AIP Stat. Research Center (e.g. # Grad. Phys. Degrees)

Student Mobility - ERASMUS+ - Hendrik FERDINANDE - ICPS2014, Heidelberg [DE] 2014-08-11/16 Lifelong Learning Training²⁰¹⁴ 21

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European think tank Physics Studies (ii)
embryo's exist

- HOPE project: 3 yrs. E.C. grant (Oct '13/Sep'16): 4 WGs
- 6th EPS 'Forum Physics & Society'

'Improving the Image of Physics', Beograd [RS] 2014-10-02/03

but should be an **organisation** (!) & **European Physical Society (EPS)** could help via 'National Phys. Societies' (42 members!)

- permanent, i.e. sustainable & all European countries represented
- part of members could be renewed every 2 to 3 yr. e.g. via an EPS Office in Brussels [BE]

Student Mobility - ERASMUS+ - Hendrik FERDINANDE - ICPS2014, Heidelberg [DE] 2014-08-11/16 Lifelong Learning Training²⁰¹⁴ 22

In both slides I want to plead for a European (official) body (~~think tank~~) (probably with the help of [the PED and the 42 national member-societies of] the EPS) so that good national initiatives (e.g. SPN in UK or KFP in DE) could be spread over the whole of Europe and where a parallel series of follow-up initiatives to HOPE could be co-ordinated.

Indeed just like the AIP (American Institute of Physics) with the APS (American Physical Society) and the AAPT (American Association of Physics Teachers) can offer a general view on physics education and its policies in all US states together, EPS should try to mimic this for an overall view on the whole of Europe. Luckily some nice aspects of the complete view at the national/regional level exist in the largest national member-societies, e.g. the Deutsche Physikalische Gesellschaft (DPG), the Institute of Physics (IoP), the Società Italiana di Fisica (SIF) and the Nederlandse Natuurkundige Vereniging (NNV)

of which the first three are HOPE partner-members. However, a permanent body consisting of 2-to-3 years-rolling national/regional representatives from all European countries should be feasible.

But *'hinc et nunc'* in Helsinki, you, who are present here, could already express your preferences to the support by the E.C. in 2016/17 (i.e. after the close of the HOPE project) by commonly (or eventually personally) filling in (before the deadline of 12 October 2014) the call by the E.C. for a *"Consultation on Horizon 2020 Science with and for Society Work programme 2016/17"* (http://ec.europa.eu/research/consultations/swafs/consultation_en.htm), which completely focuses on the specific themes and subjects which will be presented by the WGs of HOPE during the following days.

I thank all my colleagues and friends for the twenty years of fruitful co-operation, my *'network master'* Em. Pr Ernst Heer, all my network secretaries and the support by the OIR at UGent, the continuous co-operation with the students from IAPS, the EPS (David Lee and the late G. Thomas) which was pivotal in this whole story and finally Victor Bârsan for information about Laura Țugulea.

I warmly wish all the success to the HOPE endeavour.

Before closing this speech let me remember Laura Țugulea by saying *'Stimate Dona em. prof. dr. Laura Țugulea Requiescat in Pace. Multumesc* (many thanks)'. Her family, the *Universitatea din București*, the *Horia Hulubai Foundation & UNESCO Chair* and the EUPEN /STEPS/HOPE community will miss her.

References

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